



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
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Boston, MA 02109-3912**

Memorandum

Date: March 26, 2018

Subject: PFOA/PFOS Superfund Screening Levels

To: Alexandra Dunn, Regional Administrator

**From: Bryan Olson, Director
Office of Site Remediation & Restoration**

At the present time, there are no enforceable federal standards for perfluorooctanoic acid (PFOA) or perfluorooctane sulfonate (PFOS). EPA issued Lifetime Drinking Water Health Advisories (HA) for PFOA and PFOS in 2016.

As part of the HA development process a non-cancer toxicity value, or Reference Dose (RfD), for ingestion of PFOA and PFOS was developed. These RfDs are used by risk assessors in the Superfund program to develop site-specific Screening Levels (SLs).

The table below includes Superfund SLs for several receptors in various media. The exposure scenarios presented represent some of the more common encountered at Region 1 Superfund sites to date. Additional SLs have been calculated for some sites. These SLs represent a Hazard Quotient (HQ) of 0.1. Generally, EPA defines unacceptable non-cancer risk where the HQ is greater than 1.0. SLs for PFOA/PFOS are calculated on a site-specific basis. Site-specific SLs have been developed several Region 1 National Priority List (NPL) sites.

Superfund SLs are risk-based concentrations derived from standardized equations combining exposure information assumptions with EPA toxicity data, in the case of PFOA/PFOS the RfDs from the HAs. SLs are not de facto cleanup standards and should not be applied as such. SLs help identify areas, contaminants, and conditions that require further evaluation. Generally, at sites where contaminant concentrations fall below SLs, no further action or study is warranted under the Superfund program. Chemical concentrations above the SL would not automatically trigger a response action; however, exceeding a SL suggests that further evaluation of the potential risks by site contaminants is appropriate. In instances where there are multiple contaminants present, it is recommended that SLs be set at HQ = 0.1.

Superfund PFOA/PFOS Screening Levels (HQ = 0.1)

Receptor	Media	PFOA Screening Level	PFOS Screening Level
Child Resident	Groundwater	40 ppt	40 ppt
	Soil	0.126 ppm	0.126 ppm
Child Recreator	Surface Water	2.03 ppb	2.03 ppb
	Sediment	0.59 ppm	0.59 ppm
Child - Consumption	Fish Tissue	5.21E-03 mg/kg (ppm)	5.21E-03 mg/kg (ppm)
Adult - Consumption	Fish Tissue	7.22E-03 mg/kg (ppm)	7.22E-03 mg/kg (ppm)

- Screening levels are calculated based on EPA Regional Screening Level equations.
- Screening levels are calculated using the non-cancer Reference Dose (RfD) from EPA's 2016 PFOA/PFOS Health Advisories.
- Screening levels are calculated at a Hazard Index of 0.1.
- **Screening level exceedances do not represent an unacceptable risk.**

Site-specific cleanup levels for Superfund sites are developed when the Baseline Risk Assessment indicates an unacceptable risk. Such clean-up levels may be risk based, or based on Applicable or Relevant and Appropriate Requirements (ARARs) and to be considered guidance (TBCs).

Please contact me if you have additional questions.

cc: Deb Szaro
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